

ABSTRACT OF THE DISCLOSURE

In a steering angle detection device for an electric power steering apparatus, a steering wheel shaft rotation angle is derived by calculating a rotation angle signal which corresponds to a rotation angle of a steering wheel shaft within a single rotation, based upon detection signals of first and second resolvers which detect the rotation angle of the steering wheel shaft and which have different pole pair numbers. A third resolver detects, as a motor rotation angle, a rotation angle of an output shaft of an electric motor that imparts assistance force to an output member of a steering gear having a reduction ratio that varies in accordance with a steering angle of the steering wheel from a straight ahead position. A first derivative and a second derivative of the motor rotation angle with respect to the steering wheel shaft rotation angle are calculated, and a rotational direction and a rotation number of the steering wheel shaft from a neutral position are obtained based on the first derivative and a positive-negative sign of the second derivative. A steering angle of the steering wheel is then obtained from the rotation direction and the rotation number of the steering wheel shaft from the neutral position, and the steering wheel shaft rotation angle.